

IN THE CLAIMS

1 (Original). A method comprising:

exposing an implanted wafer to acoustic energy to activate the implanted species.

2 (Withdrawn). The method of claim 1 including exposing an implanted wafer to acoustic energy to activate the implanted species using a mechanical vibration source.

3 (Withdrawn). The method of claim 2 including using a piezoelectric generator.

4 (Original). The method of claim 1 including generating acoustic energy using a laser beam.

5 (Original). The method of claim 1 including exposing the implanted wafer to acoustic energy while heating the wafer.

6 (Original). The method of claim 5 wherein heating the wafer includes exposing the wafer to a laser beam.

7 (Original). The method of claim 6 wherein exposing the wafer to a laser beam includes exposing the wafer to an infrared laser beam.

8 (Withdrawn). The method of claim 5 wherein heating the wafer includes exposing the wafer to rapid thermal anneal lamps.

9 (Original). The method of claim 1 including exposing the wafer to two laser beams, said laser beams having different energy, one of said laser beams to heat said wafer and the other of said laser beams to generate phonons.

10 (Original). The method of claim 1 including annealing the wafer after ion implantation and subsequently using acoustic energy to activate the implanted species by the generation of phonons.

11 (Original). A method comprising:

implanting a semiconductor wafer; and
activating the implanted species by mechanically perturbing said wafer.

12 (Withdrawn). The method of claim 11 including using a piezoelectric transducer to perturb said wafer.

13 (Withdrawn). The method of claim 12 including using a transducer mounted in a wafer holder to perturb said wafer.

14 (Original). The method of claim 11 including applying heat to said wafer.

15 (Withdrawn). The method of claim 14 including applying heat using rapid thermal annealing lamps.

16 (Original). The method of claim 14 including applying heat using a laser.

17 (Original). The method of claim 16 including applying heat using an infrared laser.

18 (Original). The method of claim 16 including mechanically perturbing said wafer at the same time said wafer is being heated.

19 (Withdrawn). The method of claim 18 including mechanically perturbing said wafer in a rapid thermal annealing furnace.

20 (Withdrawn). The method of claim 14 including heating said wafer and then mechanically perturbing said wafer.

21 (Previously Presented). A method comprising:

exposing an implanted semiconductor wafer to a first laser at a first energy to heat said wafer to a temperature in excess of 1000°C; and

exposing said implanted semiconductor wafer to a second laser at a second energy lower than said first energy to heat said wafer to a temperature less than 1000°C.

22 (Original). The method of claim 21 including exposing said semiconductor wafer to said second laser to generate acoustical energy.

23 (Original). The method of claim 22 including generating acoustical energy to activate implanted species.

24 (Original). The method of claim 21 including exposing said semiconductor wafer to said first laser that is an infrared laser.

25 (Original). The method of claim 21 including heating said wafer to activate said species.